

-- ABSTRACT

Methods and apparatus are disclosed for dynamic allocation and management of semaphores for accessing shared resources. In one implementation, a semaphore manager maintains a data structure of resources having currently active resource requests and a list of
A1 5 each task requesting access and the particular type of access requested. When an access request is received for the first time for a resource, an entry is added to the data structure and access is authorized. Additional requests to access the resource may be received while the resource is allocated. If a new request for read access is received and the resource is currently under read access, access is granted and an entry is added to the data structure. Otherwise, the
10 resource is currently unavailable, and access is either immediately denied or queued for possible future allowance during a specified, predetermined or forever duration. --